MiRIC-E3, MiRIC-T3

Miniature Fast Ethernet to E3/T3 Remote Bridge

FEATURES

- Remote bridges connecting Fast Ethernet LANs over framed/unframed E3/T3 links
- Hot-insertion SFP footprint, MSA-compliant
- Full duplex wire-speed packet forwarding
- Selectable transmit clock source and data format
- Fault propagation from WAN to LAN link
- Basic management for configuration, status and diagnostics
- Visual fault indication
  - Loss of E3 or T3 signal
  - Loss of Ethernet link
- Flow control
- Product identification support
- Autonomous device
- Easy release mechanism
- Patent-pending technology

DESCRIPTION

- MiRIC-E3 and MiRIC-T3 forward LAN Fast Ethernet packets to TDM-based WAN networks at full duplex wire-speed, fully utilizing the expensive E3/T3 TDM circuit bandwidth.
- Housed in a Small Form Factor Pluggable (SFP) package, MiRIC-E3 and MiRIC-T3 comply with the Multi-Source Agreement (MSA).
- The units handle 64 to 2016-byte frames, including VLAN-tagged frames.
- LAN traffic is transported transparently, keeping the user LAN settings intact.
- User-selectable transmit timing sources and data format are available:
  - Receive or internal clock
  - Framed or unframed
- Management capabilities for configuration, status, and diagnostics via the I2C interface.
- LAN link fault is visually indicated by the LINK LED (green) turning off.
- E3 or T3 loss of signal is propagated by sending an electrical LOS signal to the LAN port, and is visually indicated by the LOS LED (red) turning on. This in turn can automatically turn off the LAN link. Automatically turning off the LAN link is configurable (enabled or disabled).
- Flow control mechanism is activated when LAN traffic exceeds the WAN link (E3, T3) capacity; pause packets are transmitted towards the LAN port.
- Support for transparent flow of pause packet from LAN to WAN.
- MiRIC-E3 and MIRiC-T3 operate opposite another MiRIC-E3 or MIRiC-T3, or alternatively opposite RAD's RICi-E3, RICi-T3, or Egate (central Ethernet gateway) devices.
- The devices are autonomous plug-and-play modules.
- MSA product identification codes are supported.
- A special release mechanism allows the device to be easily extracted from the socket.

POSSIBLE APPLICATIONS

- Transparent LAN services over leased lines
- Remote branch connectivity over E3/T3 lines
- Connecting LANs over E3/T3 radio links
- Campus applications – connecting remote LANs.

SPECIFICATIONS

E3 WAN INTERFACE

- **Number of Ports**
  1
- **Compliance**
  G.703, G.775, G.823, G.832
- **Data Rate**
  34.368 Mbps
- **Line Code**
  HDB3, AMI
- **Framing**
  Framed, unframed
- **Line Impedance**
  75Ω, unbalanced
- **Connector**
  SMB coaxial connector
- **Cable Length**
  275m (900 ft) with RG59 indoor cable

T3 WAN INTERFACE

- **Number of Ports**
  1
- **Compliance**
  G.703, G.704, G775, G.824
- **Data Rate**
  44.736 Mbps
- **Line Code**
  B3ZS, AMI
- **Framing**
  Framed, unframed
- **Line Impedance**
  75Ω, unbalanced
- **Connector**
  SMB coaxial connector
- **Cable Length**
  275m (900 ft) with WECO 728A indoor cable
  137m (450 ft) with cable type 735

LAN INTERFACE

- **Type**
  Fast Ethernet SFP port complying with MSA
- **Compliance**
  IEEE 802.3
- **Edge Connector**
  SFP-based, MSA-compliant

WAN PROTOCOL

- **Type**
  HDLC-like framing (native HDLC compatible with RAD products)

GENERAL

- **Indicators**
  LINK (green) – Ethernet link status
  LOS (red) – E3/T3 loss of signal
- **Regularity Compliance**
  Safety: IEC 60950
  EMI: EN55022, EN55024, FCC-15
- **Transmit Clock**
  Internal or receive
- **Power**
  3.3 V, up to 360 mA
- **Power dissipation**
  Less than 1.2W
- **Environment**
  Temperature: -40 to 70°C (-40 to 158°F)
  Humidity: Up to 90% non–condensing
- **Physical**
  Height: 13.8 mm (0.54 in)
  Width: 15.8 mm (0.62 in)
  Depth: 70.0 mm (2.76 in)
  Weight: 30.0 g (1.0 oz)

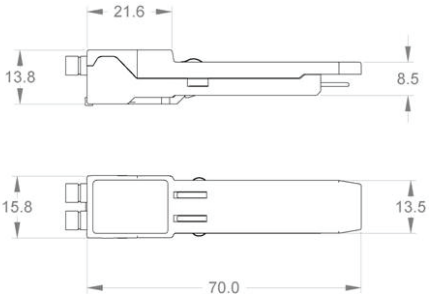

Figure 2. Physical Dimensions

ORDERING

MiRIC-E3/CBL-BNC
Miniature Fast Ethernet to E3 remote bridge with two 30 cm (11.8 in) SMB-to-BNC cable adapters

MiRIC-T3/CBL-BNC
Miniature Fast Ethernet to T3 remote bridge with two 30 cm (11.8 in) SMB-to-BNC cable adapters

APPLICATION

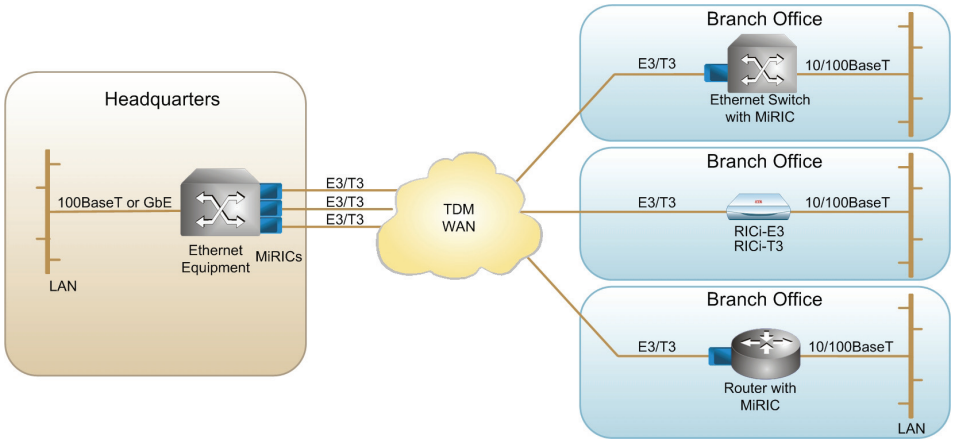

Figure 1. Providing Transparent LAN Services over Leased Lines

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417-100-09/06

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